U.S. and European Acceptance of Alternative Methods 1998-2009[1] (Arranged by Test Method Evaluation Area)

Acute Dermal Systemic Toxicity

Method	ICCVAM BRDs and Peer Review	U.S. Regulatory Acceptance/ Endorsement	OECD/Other Adoption	EU Regulatory Acceptance/ Endorsement[2]
In vitro dermal absorption methods	ICCVAM contributed to U.S. OECD TG review, expert consultation meetings	Yes, as OECD TG 428 in 2004	OECD TG 428 (2004)	Yes, via OECD

Acute Oral Systemic Toxicity

Method	ICCVAM BRDs and Peer Review	U.S. Regulatory Acceptance/ Endorsement	OECD/Other Adoption	EU Regulatory Acceptance/ Endorsement[2]
Up and Down Procedure (UDP)	ICCVAM peer review and report; recommended in 2001	Yes, accepted by U.S. in 2003; as OECD TG 425	OECD TG 425 (2001)	Yes, via OECD
Fixed Dose Procedure (FDP)	ICCVAM Working Group (WG) contributed to TG development	Yes, as OECD TG 420 in 2001	OECD TG 420 (2001)	Yes, via OECD
Acute Toxic Class Method (ATC)	ICCVAM WG contributed to TG development	Yes, as OECD TG 423 in 2001	OECD TG 423 (2001)	Yes, via OECD
Acute Toxicity *In Vitro* Starting Dose Procedure, 3T3 cells	Yes, 2001 workshop report; 2006 peer review and report; recommended in 2008	Yes	*OECD Guidance Document in review*	*OECD Guidance Document in review*
Acute Toxicity *In Vitro* Starting Dose Procedure, NHK cells	Yes, 2001 workshop report; 2006 peer review and report; recommended in 2008	Yes	*OECD Guidance Document in review*	*OECD Guidance Document in review*

Biologics Testing

Method	ICCVAM BRDs and Peer Review	U.S. Regulatory Acceptance/ Endorsement	OECD/Other Adoption	EU Regulatory Acceptance/ Endorsement[2]
Use of Humane Endpoints in Animal Testing of Biological Products	ICCVAM agency initiative	Yes, 9 CFR 117.4e	NA	
Rabies Vaccine, Humane Endpoints	ICCVAM agency initiative	Yes, 9 CFR 117.4e	NA	
ELISA Test for Batch Potency Testing of Erysipelas Vaccines (refinement)	ICCVAM coordinated agency consideration	Yes, per 27 CFR 610.10; are reviewed on a case-by-case basis	NA	Published in European Pharmacopeia
Relevance of the Target Animal Safety Test for batch safety testing of vaccines for veterinary use	ICCVAM coordinated agency consideration	Yes, per 9 CFR 113.4	NA	Published in European Pharmacopeia
ELISA Test for Batch Potency Testing of Human Tetanus Vaccines refinement	ICCVAM coordinated agency consideration	Yes, per 27 CFR 610.10; are reviewed on a case-by-case basis	NA	Published in European Pharmacopeia

ToBI Test for Batch Potency Testing of Human Tetanus Vaccines refinement	ICCVAM coordinated agency consideration	Yes, per 27 CFR 610.10; are reviewed on a case-by-case basis	NA	Published in European Pharmacopeia

Dermal Corrosivity and Irritation

Method	ICCVAM BRDs and Peer Review	U.S. Regulatory Acceptance/ Endorsement	OECD/Other Adoption	EU Regulatory Acceptance/ Endorsement[2]
CORROSITEX Skin Corrosivity Test	ICCVAM peer review and report; recommended in 1999	Yes, accepted by U.S. in 2000; as OECD TG 435 in 2006	OECD Test Guideline (TG) 435 (2006)	Yes, via OECD
EpiSkin Skin Corrosivity Test	ICCVAM review and report; recommended in 2002	Yes, as OECD TG 431 in 2004	OECD TG 431 (2004)	67/548/EEC
EpiDerm Skin Corrosivity Test	ICCVAM review and report; recommended in 2002	Yes, as OECD 431 in 2004	OECD TG 431 (2004)	67/548/EEC
SkinEthic Skin Corrosivity Test	ICCVAM contributed to U.S. OECD TG review	Yes, as OECD 431 in 2004	OECD 431 (2004)	Yes, via OECD
Rat TER Skin Corrosivity Test	ICCVAM review and report; recommended in 2002	Yes, as OECD TG 430 in 2004	OECD TG 430 (2004)	67/548/EEC

Dermal Phototoxicity

Method	ICCVAM BRDs and Peer Review	U.S. Regulatory Acceptance/ Endorsement	OECD/Other Adoption	EU Regulatory Acceptance/ Endorsement[2]
3T3 NRU Phototoxicity Test	ICCVAM contributed to U.S. OECD TG review	Yes, as OECD TG 432 in 2004	OECD TG 432 (2004)	67/548/EEC
3T3 NRU Phototoxicity Test: Application to UV Filter Chemicals	ICCVAM contributed to U.S. OECD TG review	Yes, as OECD TG 432 in 2004	OECD TG 432 (2004)	Yes, via OECD

Immunotoxicity: Allergic Contact Dermatitis

Method	ICCVAM BRDs and Peer Review	U.S. Regulatory Acceptance/ Endorsement	OECD/Other Adoption	EU Regulatory Acceptance/ Endorsement[2]
Local Lymph Node Assay for skin sensitization	ICCVAM peer review and report; recommended in 1999	Yes, accepted by U.S. in 1999; as OECD TG 429 in 2002	OECD TG 429 (2002) ISO (2002)	Yes, via OECD

Ocular Corrosivity and Irritation

Method	ICCVAM BRDs and Peer Review	U.S. Regulatory Acceptance/ Endorsement	OECD/Other Adoption	EU Regulatory Acceptance/ Endorsement[2]
Bovine Corneal Opacity and Permeability (BCOP) Test Method	Yes, peer review and report; recommended in 2007	Yes, acceptance in 2008	OECD TG 437 (2009)	Yes, via OECD
Isolated Chicken Eye (ICE) Test Method	Yes, peer review and report; recommended in 2007	Yes, acceptance in 2008	OECD TG 438 (2009)	Yes, via OECD

Pyrogen Testing

Method	ICCVAM BRDs and Peer Review	U.S. Regulatory Acceptance/ Endorsement	OECD/Other Adoption	EU Regulatory Acceptance/ Endorsement[2]
Human Whole Blood/Interleukin-1β *In Vitro* Pyrogen Test	ICCVAM peer review and report; recommended in 2008	Yes, acceptance in 2009	NA	Accepted by European Pharmacopeia
Human Whole Blood/Interleukin-1β *In Vitro* Pyrogen Test: Application of Cryopreserved Human Whole Blood	ICCVAM peer review and report; recommended in 2008	Yes, acceptance in 2009	NA	Accepted by European Pharmacopeia
Human Whole Blood/Interleukin-6 *In Vitro* Pyrogen Test	ICCVAM peer review and report; recommended in 2008	Yes, acceptance in 2009	NA	Accepted by European Pharmacopeia
Human Peripheral Blood Mononuclear Cell/Interleukin-6 *In Vitro* Pyrogen Test	ICCVAM peer review and report; recommended in 2008	Yes, acceptance in 2009	NA	Accepted by European Pharmacopeia
Monocytoid Cell Line Mono Mac 6/Interleukin-6 *In Vitro* Pyrogen Test	ICCVAM peer review and report; recommended in 2008	Yes, acceptance in 2009	NA	Accepted by European Pharmacopeia

[1]Updated September 17, 2009
[2]Information provided by Executive Secretary, ESAC (European Centre for the Validation of Alternative Methods Scientific Advisory Committee), April 13, 2008